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IN THE CLAIMS:

1. (originally presented) A flowmeter, comprising:

a primary flow sensor;

sensor electronics connected to said primary flow sensor for proving a measurement signal;

a signal processing unit connected to said sensor electronics for determining the flow, said signal processing unit being set to produce a signal proportional to the flowrate or the square of the flowrate; and

an output signal generator for generating an output signal proportional to the signal of the signal processing unit.

2. (originally presented) The flowmeter according to claim 1, further comprising:

a communication interface, allowing a user to set the output signal to be proportional to the flowrate or the square of the flowrate.

3. (originally presented) The flowmeter according to claim 1, wherein:

said primary flow sensor includes two ultrasonic transducers serving as transmitters and receivers.

4. (originally presented) The flowmeter according to claim 1, wherein:

said output signal generator comprises part of said signal processing unit

5. (new) The flowmeter according to claim 1, for replacing a differential flowmeter in a fluid flow system..

6. (new) An ultrasonic flowmeter for measuring fluid flow, comprising:

a primary flow sensor including a pair of ultrasonic transducers which are spaced apart in the direction of the fluid flow, each ultrasonic transducer emitting an ultrasonic beam into the fluid flow which is received by the other ultrasonic transducer;

sensor electronics connected to and receiving the signals generated by said ultrasonic transducers, and generating therefrom a measurement signal; and

a signal processing unit for receiving said measurement signal and determining the flow of the fluid by producing a signal proportional to the flowrate or the square of the flowrate of the fluid.

7. (new) The flowmeter according to claim 6, for replacing a differential flow meter in a fluid flow system.

8. (new) The flowmeter according to claim 6, further comprising:

a communication interface connected to said signal processing unit, allowing a user to set said signal produced by said signal processing unit to be proportional to the flowrate or the square of the flowrate, wherein :

said signal processing unit includes an output signal generator for generating said signal which is proportional to the flowrate or the square of the flowrate of the fluid.